Part 573 Safety Recall Report 19V-830

Manufacturer Name : Arcimoto Inc
Submission Date : NOV 19, 2019
NHTSA Recall No. : 19V-830
Manufacturer Recall No. : NR

Manufacturer Information :

Manufacturer Name : Arcimoto Inc
Address : 2034 W. 2nd Ave
Eugene OR 97402
Company phone : 5958232

Population :

Number of potentially involved : 25
Estimated percentage with defect : 100 %

Vehicle Information :

Vehicle 1 : 2019-2019 Arcimoto FUV
Vehicle Type : MOTORCYCLES
Body Style : OTHER
Power Train : HYBRID ELECTRIC
Descriptive Information : Affects first twenty-five MY2019 vehicles produced through to 11/08/2019.
Production Dates : SEP 19, 2019 - NOV 08, 2019
VIN Range 1 : Begin : 7F7ATR312KER00000 End : 7F7ATR315KER00024 ☐ Not sequential

Description of Defect :

Description of the Defect : Due to specification of unnecessarily long pins of a 5V regulator on the display backer board, the pins are able to make contact with the display's RGB ribbon-cable. Over time, the pins can scrape against the display's RGB ribbon-cable, which can eventually lead to a short-circuit between the 12V bus and a ground wire on the display's RGB ribbon-cable. A short-circuit between the 12V bus and ground wire on the display's RGB ribbon-cable may cause the communication board and the display board to shut down.

FMVSS 1 : NR
FMVSS 2 : NR

Description of the Safety Risk : If the communication board goes through a full power cycle (power is removed, then power is reapplied), it would result in battery shutdown and loss of traction-power. Separately, if the short-circuit persists, a fuse will blow causing the display and communication boards to be permanently disabled, leading to unexpected battery shutdown and immediate loss of traction-power, which would make the vehicle more difficult to control and increase the likelihood of a crash.

Description of the Cause : NR

Identification of Any Warning that can Occur :	None.

Supplier Identification :

Component Manufacturer

Name :	NR
Address :	NR
	NR
Country :	NR

Chronology :

On November 8th, 2019, an Arcimoto electrical engineer doing workbench hardware tests to power up the display module's antenna observed that the unit was drawing too much current, and consequently discovered a short-circuit issue. The Root Cause was determined to be a mechanical interference from overlength pins of the 5V regulator interacting with the display's RGB ribbon-cable. In addition to overlength pins of the 5V regulator, three additional pin-groups were determined to also have pins that are too long and should be trimmed shorter. The first documented case, outlined above, was discovered in a recovered display backer board from an Engineering test-vehicle. By November 11, 2019, the same mechanical interference situation was subsequently identified by inspection in Retail build vehicles, and Engineering and Q&RA Departments' managers were notified. While additional testing and data collection continued, these two departments evaluated the situation and risk, and documented findings and recommendations. On November 12, 2019 the Q&RA Department presented documentation and findings to Arcimoto executives, who subsequently decided on November 13, 2019 to validate the findings of Safety issue from Engineering and Q&RA Departments, and notify NHTSA of a Safety Recall.

Description of Remedy :

Description of Remedy Program :	Owner's will be notified by mail and instructed to contact Arcimoto to schedule a service appointment. A service technician will rework the display backer board by trimming the pins of the 5V regulator, and applying a layer of VHB tape to provide conductive insulation. There will be no charge to vehicle owners for this service. To the best of our knowledge, no owners have incurred any costs resulting from this defect.
How Remedy Component Differs from Recalled Component :	The defect will be remedied by reworking the display backer board according to an updated assembly methodology: (i) trimming the pins of all four pin-groups (including pins of 5V regulator) on the display backer board, and (ii) applying a layer of VHB tape to provide conductive insulation and further reduce the possibility of interaction between the four pin-groups (including the 5V regulator pins) and the display's RGB

	ribbon-cable.
Identify How/When Recall Condition was Corrected in Production :	After determination of Root Cause and permanent corrective action, Engineering Department immediately provided communication to Manufacturing Department's Electrical Assembly who then reworked all non-installed assemblies that were in-process, and then Engineering and Q&RA Departments followed up in-person to verify that (i) all in-process display backer boards were properly reworked, and (ii) all subsequent display backer boards produced are according to the updated assembly methodology.

Recall Schedule :

Description of Recall Schedule :	NR
Planned Dealer Notification Date :	NR - NR
Planned Owner Notification Date :	NR - NR

* NR - Not Reported